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09/493,319	01/28/2000	Samson Huang	INTL-0312-US (P7995)	2102

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EXAMINER

JORGENSEN, LELAND R

ART UNIT	PAPER NUMBER
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2675

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/493,319
Filing Date: January 28, 2000
Appellant(s): HUANG, SAMSON

Fred G. Pruner, Jr.
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 7 May 2004.

(1) *Real Party in Interest*

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A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

The amendment after final rejection filed on 3 May 2004 has been entered.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

(7) *Grouping of Claims*

The rejection of claims 45 – 49 and 53 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

The rejection of claims 50 – 52 and 54 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

(8) *Claims Appealed*

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) *Prior Art of Record*

6,333,737 B1	NAKAJIMA	12-2001
6,297,787 B1	NISHIDA	10-2001
5,771,031	KINOSHITA et al.	06-1998

(10) *Grounds of Rejection*

The following ground(s) of rejection are applicable to the appealed claims:

Claims 45 – 49 and 53 are rejected under 35 U.S.C. 103(a). This rejection is set forth in a prior Office Action, mailed on 10 December 2003. See pages 2 –3 and 6 – 8.

Claims 50 - 52 and 54 are rejected under 35 U.S.C. 103(a). This rejection is set forth in a prior Office Action, mailed on 10 December 2003. See pages 2 –3 and 6 – 8.

(11) *Response to Argument*

Examiner rejected independent claims 45 and 50 each under 35 U.S.C 103(a) over Nakajima in view of Nishida. Nakajima teaches a liquid crystal display having a memory for each pixel. Nishida teaches a display having a memory for a groups of related pixels. In the appeal brief, applicant argued that the examiner failed to show motivation for combining the teachings of Nishida with Nakajima. Examiner stated the following motivation.

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide memory to multiple pixels as taught by Nishida with the light modulator array as taught by Nakajima. Such combination would reduce components and costs without decreasing the advantages of the invention of Nakajima.

Prior Office Action, page 3. Nishida suggests such motivation by teaching,

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In such a configuration, it is still sufficient to provide single memory and single controller for the single display unit, since display information with respect to respective forty-eight light emitting diodes can be stored into the single memory.

Nishida, col. 13, lines 56 – 60.

Moreover, one in the art always seeks to reduce the number of components in a circuit to decrease costs and complexity if such can be done without hurting the functioning of the circuit. Nishida's teaching is that a single memory may support a groups of related pixels, such as the red, green, and blue pixels shown in Nishida, figures 8 and 10, rather than just a single pixel. This will reduce cost and complexity because, instead of one memory for only one pixel, there would be one memory for a group of related pixels. Over a display, this would reduce the space required by the memory elements and increase the space for the light producing pixel elements. Applicant's assertion that reducing the memory elements may increase the cost and complexity of the circuit is unfounded. Decreasing components while retaining function will decrease the complexity and cost of any circuit, whether that circuit consists of discrete or integrated elements. Generally, the reducing techniques of a discrete element circuit as taught by Nishida is equally applicable to an integrated circuit such as the circuit taught by Nakajima.

Applicant also asserts that the combination does not teach that the memory is located closer to the associated groups of pixel elements than to another one of the groups of pixel cells. Nakajima in figure 1 shows the memory 22 embedded into the pixel 2 with the liquid crystal display device 1 being superimposed over the memory. It is inherent that a memory embedded in a pixel would be closer to the pixel than to other pixels.

Moreover, one in the art combining Nakajima with Nishida would locate the memory as close to the associated pixel elements as possible to minimize any space taking lead lines with

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their associated resistance and capacitance. One in the art would also locate the memory generally center of the pixel elements so that all pixel elements are equal distance from the memory to reduce any variation of capacitance and resistance associated with different length lead lines. Thus, it is inherent that the memory would be located closer to the associated groups of pixels rather than to another unrelated group of pixels.


For the above reasons, it is believed that the rejections should be sustained.


Respectfully submitted,

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October 30, 2004

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